

Contradictions in American Downtownscape
Three Prospects for Urban Centrality

Zbigniew Zuziak

Center for Metropolitan Planning and Research
The Johns Hopkins University
Baltimore

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Motto:--a story cited by Von Eckardt (1967, pp. 274-5) from Norton
Juster's children's book The Phantom Tollbooth.

"Many years ago, on this very spot, there was a beautiful city of fine houses and living spaces, and no one who lived here was ever in a hurry. The streets were full of wonderful things to see and the people would often stop to look at them."

"Didn't they have anyplace to go?" asked Milo.

"To be sure," continued Alec; "But, as you know, the most important reason for going from one place to another is to see what's in between, and they take great pleasure in doing that. Then one day someone discovered that if you walked as fast as possible and looked at nothing but your shoes you would arrive at your destination much more quickly. Soon everyone was doing it. They all rushed down the avenues and hurried along the boulevards seeing nothing of the wonders and beauties of their city as they went."

Milo remembered the many times he'd done the very same thing; and, as hard as he tried, there were even things on his own street he couldn't remember. "No one paid any attention to how things looked, and as they moved faster and faster everything grew uglier and dirtier, and as everything grew uglier and dirtier they moved faster and faster, and at last a very strange thing began to happen. Because nobody cared, the city slowly began to disappear. Day by day the buildings grew fainter and fainter, and the streets faded away, until at last it was entirely invisible. There was nothing to see at all."

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Objective, Approach, Scope

This is an attempt to characterize the environmental qualities of American downtownscape from different perspectives such as:

- the present stage of American urbanization; (or rather "counterurbanization");

- the experiences derived from the various projects of the downtown redevelopment;

- the theory of urban form.

This approach implicitly assumes the actual and potential feed-backs between those factors mentioned and the downtownscape.

Socio-economic, demographic, cultural and consequently functional trends which characterize the present stage of American urbanization, sharpened the disparities between the outer and inner city undermining the health of the latter. At the same time, the weaker the drawing forces of the city center have become, the fainter the chance for taming metropolitan sprawl. The inter-relation between urban sprawl and the decline of central cities has the tendency to perpetuate the negative changes which appeared in many facets affecting the quality of urban life.

Various urban renewal programs implemented throughout the country, beginning in the 1950's, may be considered as the first attempt to break this vicious circle. Apparently, they reflected a belief that the change of physical structure would help downtown to regain its vitality. Nevertheless, despite the amount of capital involved and impressive architectural efforts, the signs of real recovery have scarcely shown up.

The self perpetuating process of counterurbanization continues, causing

doubts in the validity of the downtown renewal. This skepticism can be expressed in the form of three questions:

- 1) Firstly, one may discredit architectural concepts blaming them for the dissatisfaction with, if not the failure of, the spatial solutions employed: in other words, positive social changes do not occur because the new urban form was still inappropriate.
- 2) Secondly, a possible question is of more general nature because we may ask to what degree, if at all, the urban form is relevant to the process of the downtown decline: in other words, whether any change of the urban form may be regarded as a significant remedy for metropolitan illnesses. This standpoint implies that the complexity of urban problems demand a comprehensive action; however, there is no unanimity as to how comprehensive it should be.
- 3) We may even go further, questioning the justification for any "rescue operation" for the inner city, and accepting urban sprawl as the consequent course of urban dynamics. This implies the rationalization of an entirely new metropolitan structure emerging through the process of diffusion at the expense of the inner city. By exhausting its drawing potentialities, the inner city apparently closed the major chapter of the history of urban development.

Let us start the discussion from that last question. Such a consequence of counterurbanization is envisaged by B. J. L. Berry (1975, p. 184). E. A. Gutkind is even more explicit and at the same time more "unscrupulous" with regard to human potentialities inherent in city centers. For him, modern central city is a "cancer of urban existence" and a "saving of downtown is not worthy of effort."¹ As the justification of his standpoint, Gutkind argues that "...electronics and computers work against the ever-worsening

concentration in the central areas of cities. Closed-circuit television can easily replace face-to-face meetings and contacts and the herding together of people in business compounds."² If I disagree with such a statement, it is not because it seems to be too futuristic but too inhuman.

B. J. L. Berry's argument, however, is very consistent and difficult to defeat since he looks upon the central city in the context of urban dialectics: i.e., forces of centralization and decentralization. The rationalization of an urban sprawl, as I understand him, comes from the skepticism about the prospect of a comprehensive action which could set in motion the forces of centralization. This leads us back to the last part of the second question.

It is noticable that a comprehensive approach, originating from the system analysis, shows a tendency to incline towards a centralized³ structure of planning. But, as B. J. L. Berry indicates "...large-scale central planning that eliminates the central city underclass by income redistribution and renews the cities on a comprehensive basis out of the public's purse, as being attempted throughout Western Europe. But such direction is inconsistent with the cultural predispositions and values of the American mainstream, for it would require a reconstructing of values and a substitution of community concern for privatized decision." (B. J. L. Berry, 1975, p. 184).

But one may ask if decentralization must necessarily mean "urban sprawl;" that is to say, a particular phenomenon of amorphic development which is defined as sprawl. We can envisage a reshaping of metropolitan areas which would follow the forces of decentralization but would still maintain the features of a clearly structured organism. Its organization could be based on socio-spatial units, clearly defined and relatively small, relatively autonomous and manageable. That is definitely not a new idea since a neighborhood concept has its long

tradition. This time, however, it appears in the new context namely as an alternative almost proven by the crisis in the manageability of superstructures. Writes Christopher Alexander (1977, p. 11): "There are natural limits to the size of groups that can govern themselves in a human way. The biologist J. B. S. Haldane has remarked on this in his paper, "Being the Right Size" "...just as there is a best size for every animal, so the same is true for every human institution. In the Greek type of democracy all the citizens could listen to a series of orators and vote directly on questions of legislation. Hence their philosophers held that a small city was the largest possible democratic state..." (J. B. S. Haldane, "On Being the Right Size," *The World of Mathematics*, Vol. II, J. R. Newman, ed. New York: Simon and Shuster, 1956, pp. 962-67--cited in Christopher Alexander, *op.cit.*)³ Assuming the necessity of the "right size," Christopher Alexander develops the hierarchy of patterns; from the region of 8,000,000 people, the major city (500,000 people), communities and small towns down to neighborhoods, which he calls "identifiable neighborhood" since "people need an identifiable spatial unit to belong to" (Christopher Alexander, 1977, p. 80-81). Although the Alexander system of socio-spatial patterns is very consistent and convincing, it is still only one of those possible.

We may continue our series of questions asking: What are the limits to decentralization and what does it mean to the city center? Which of the city center's functions can be taken over by subcenters and to what degree? It is not my intention to discuss them now. Instead, I would like to point out that none of those approaches discussed so far could convincingly prove that a functional role of the city center is "passé." Moreover, there is enough

evidence to believe that as any healthy organism, urban organisms must also have a center with which to control the whole system of urban hierarchies. Also, looking at the problem of the city center from an economic point of view, one can sooner or later realize that unless we intervene, social costs of the abandonment of the downtown will rise so high that there will be no such a city which could afford to pay them. The intervention or action must be related to a concrete space; which means it must include an urban design so the problem of city centers should also be considered in design categories. Since "the ultimate object of design is form" (Alexander, Christopher, 1967, p. 15), we should reconsider the basic questions of the urban form in terms of fit or mismatch between the urban form and the context.⁴ Consequently, it is the theory of urban form where we may find the principles governing this fit. Here lie "the forces of the third kind" which should also affect the spatial structure of the new downtown.

Summing up the approach which has been employed here, I regard the downtown as if it were the object of the game between the three kinds of forces determining its form: 1) The forces of urbanization--leading to the decline of the social and consequently the spatial fabric of the inner city. This is mainly a socio-economic process but with spatial significance. 2) The forces of business as a reaction against the decline of the downtown partially supported by and coordinated with a municipal or governmental intervention. This action is basically oriented to the economic aspects of the downtown decline: it is aimed to rescue the interest of the capital involved. Therefore, the language of a new space should convey the message, and in fact it does, that private enterprise is powerful enough to overcome the crisis.⁵ 3) The theory of urban form, i.e., the intellectual forces which should be employed in order to avoid the mismatch between the expected and the actual

use of designed space. Here I would like to emphasize the distinction between the theory of urban form and tendencies (or styles) in urban design, (however, there are interrelations and overlappings between those terms).

In consecutive chapters I will try to describe those forces. Chapter II synthesizes the socio-economic trends which are commonly named as the inner city decline. In Chapter III I will examine selected cases of the downtown renewal. Confronting these examples with the trends described in the previous chapter, one gets the impression of the actual contribution of these various renewal projects to the improvement of urban life. Specifically, I focus my attention on the question of the use of open space in new American centers. Chapter IV is devoted to the theory of urban form with a particular reference to the concept of the open spaces and its role in American cityscape (especially downtownscape). Here I present various approaches to cityscape with special attention dedicated to such issues as: man's perception of the cityscape and the interrelations between the open space and behavioral settings. This is basically the field where I am looking for the interpretation of the differences in the use of downtown open spaces between American and European cities.

American Downtown in the Context of the
Post-Industrial City's Problems

The Causes and Symptoms of the Downtown's Decline Seen as the Dichotomy within Metropolitan Areas/The Inner-Outer City Discrepancies. Socio-Economic Environment of Downtown.

Since the downtown constitutes the core of the inner city, its situation reflects the problems which have been faced by most of the largest central cities in this country. On the other hand, as it was pointed out previously, the decline of the city cores has been diffusing the changes all over the city consequently speeding up and perpetuating the whole process of the transformation of metropolitan areas. Apparently the most significant feature of this transformation is that the new structural interrelations which emerged are beginning to question the logic of centrality. Therefore the American downtown, or CBD, as the product of this logic, happened to be the main victim. Writes Ernest Erbert (1974, p. 23):

Within the industrial city, the inexorable logic of centrality produced the modern central business district, and within it as benchmark, the high value intersection.

The latter became the point of reference in rationing degree of centrality of location through the price mechanism of ground rent. The premium placed upon centrality, and the price placed on advantageous parcels resulted in efforts to maximize returns by intensity of use, resulting in extremely high percentage of coverage of lot by structure, and construction to as great a height as the technology of building and of vertical transportation would permit until the dangers to public health, order and welfare eventually resulted in public regulation of density and height through zoning and building codes.

In the post-industrial city the forces of urbanization seemed to change their direction and turned the main intersection, which Ernest Erbert wrote about, into the Gordian Knot.

The dichotomy which governs the metropolitan areas--the new form of urban settlement--is only the consequence of that change. Dichotomous development characterizing the present stage of American urbanization, sometimes called "counterurbanization,"¹ was preceded by the process of suburbanization which

characterized the United States since at least the 1930's² and was substantially boosted during the boom of the 1950's.

II.1. The Causes of the Transformation of Metropolitan Areas

II.1.1. Technological Changes--automobile, the development of electronic communication (e.g., closed circuit television).

II.1.2. "National" Affluence³--widespread affluence resulting from the general increase of productivity, economic boom of the 1950's plus federal aid programs (FHA, VA loans). Thus two factors facilitated the increase of car-ownership and home-ownership in the suburb.

II.1.3. Cultural Roots⁴--ideas and patterns of life-style, American attitude towards a) newness (The Love of Newness), b) nature (Nearness to Nature), c) mobility (Freedom to Move), d) individualism, e) The Melting Pot, f) violence, and g) The Sense of Destiny.

II.1.4. Some Aspects of Political Institutions--polygovernmental structure/ governmental fragmentation; the complexity and contradictions of intergov-
ernmental relations.⁵

II.1.5. Functional Loss of Accessibility--mostly due to traffic congestion. This factor, combined with other symptoms of CBD's decline, affected commercial activities (retail areas were first struck among commercial activities), stimulating the chain reaction of quantitative and qualitative changes.

II.2. The Symptoms of the Inner City's Decline

Recent dichotomous transformations of metropolitan areas, which victimized the inner city and the downtown in particular, are visible in almost all facets of urban life. The affected population structure, business and public services.

Susceptibility to these changes varies relatively to the size and the age of the city (generally proportional relationship) and depends on the geographical location of a particular SMSA (North-East vs. "Sunbelt"). The trends described below, like in a vicious circle, once started, began to feed themselves. The result? Increasing discrepancies between two cities and two societies.

We can distinguish at least seven basic and interrelated trends which characterize the present inner city. These are:

II 2.1 Loss of Population

II 2.2 Aging of Population

II 2.3 Change of Racial Composition

II 2.4 Loss of Jobs and Negative Changes in the Soci-Economic Characteristics of Households

II 2.5 Decline of Housing Stock and Major Urban Services

II 2.6 Civic Disorder

II 2.7 Decline of Business

II.2.1. Loss of Population

More than 50% of the central cities in the largest SMSA's lost their population between 1960 and 1973 due to both the decline in the natural increase⁶ in population and to out-migration. Between 1960-1970 almost five million whites, largely skilled and middle class, migrated out of the inner cities of the United States.⁷ Consequently, in 1970, for the first time, population of metropolitan suburbs exceeded the number of inhabitants of the central cities (74.9 million to 62.2 million).

II.2.2. Aging of Population

The analysis of data concerning the age composition of major SMSA's shows that in the decade from 1960 to 1970 the proportion of older population increased in the inner city much more than in the outer city.

II.2.3. Change of Racial Composition

The population decline reflected a substantial drop in white population during the decade from 1960-1970, (from 82.2% to 78.1% on the average in major central cities).⁹ At the same time, the proportion of blacks in the inner cities increased from 15.6% to 19.6% on the average.¹⁰ This was because of white exodus, black in-migration and the natural increase of blacks in inner cities exceeded that of whites by 21.6% to 8.6%.¹¹

There are no data available about the proportion of such groups as Mexican-Americans, Puerto Ricans, Orientals, American Indians and other ethnic minorities which also increased, creating the substantial part of the population composition of the inner city.

The significance of the changes in the racial composition of the inner city's population appears only when read together with corresponding socio-economic symptoms and seen in the context of "unresolved race relations between an advantaged and dominant majority and a disadvantaged and oppressed minority," and the new aspects of the black's struggle as both racial group and social class.¹²

II.2.4. Loss of Jobs and Negative Changes in the Socio-Economic Characteristics of Households

In the decade of the 1960's, an increasing proportion of jobs in major SMSA's were located outside the inner city. The largest cities in the East suffered an actual loss of jobs. Geographic mismatch between jobs and skills (Skills gap)

caused growing labor supply of unskilled employed in the inner city at the same time as an increasing welfare dependency among its inhabitants.¹³

Per capita income structure and median family income are generally lower in the major cities of the country than in the suburbs and this discrepancy has widened since 1960. There is also a trend toward the concentration of persons with incomes below the poverty level in the inner city. In 1970,¹⁴ 13.4% of the population of this category lived in the inner city.

Further data characterizing the structure of households evoke an even gloomier picture of the social fabric within the inner city. The number of female-headed families is much higher here than in the suburbs. Tenancy exceeds home-ownership and car-ownership is lower, increasing dependency on public transportation (also declining).

II.2.5. Decline of Housing Stock and Major Urban Services

The decline of the socio-demographic fabric of the inner city undermined its spatial structure (first of all, existing housing stock is undergoing a cycle: abandonment, invasion and over-exploitation, abandonment and deterioration) and its economic base, in general. This led to fiscal and consequently financial difficulties which weakened (and in some instances even threatened to disable) major municipal services (schools, health care, public transportation, garbage disposal, etc.). The decline of public facilities however, affects the social fabric increasingly depending upon these services feeding the syndrome of poverty.

II.2.7. Civil Disorder

Poverty, unemployment (especially high among black youth), broken families; all these factors, combined with the decline of municipal services, stimulate social disorganization expressed by the high rate of crime and the racial

¹⁵
tension in the inner city.

II.2.7 Decline of Business

The abovementioned trends affected business in the inner city (downtown in particular). The decline of business in turn perpetuated the abovementioned social changes. Retail areas of the central cities were first hurt by suburban exodus. Lower incomes of the remaining city residents, troubles with accessibility (due to traffic congestion and lack of parking spaces) and higher taxes have handicapped the inner city's trade in its competition with the commercial strip and consequently stimulated the decentralization of retail sales from the downtown to the surrounding suburban markets.¹⁶

Statistical data show that between 1963-72, retail trade volume in the central cities of the major metropolitan areas grew slower than in the suburbs.¹⁷ A number of major corporations also started experiments with the decentralization of offices encouraged by such advantages of suburban location as lower space rental cost and property tax, better accessibility and less security problems. It is difficult to predict, however, to what extent those advantages (or those inner city disadvantages) may balance¹⁸ the traditional privileges related to central location.

Chapter III Downtown Renewal

Genealogy of new American city centers; brief review of selected examples of downtown renewal; classification of the spatial patterns of new American city centers; criticism and evaluation of downtown renewal.

III.1. Genealogy of New American City Centers

It would be difficult to indicate any particular date as the beginning of the process which has been described in the previous chapter. We may say that the first symptoms of the decline emerged in the 1940's in the older and largest cities of the Northeast. Within the next decades this process spread over the country so that in the 1960's it struck practically all the major cities. In the early 1950's however, the rate of decline in those cities which suffered first was so alarming that a decisive action had to be taken. Writes Raymond Vernon:

Those who have been concerned with transforming our urban areas have not confined their efforts to the use of such feeble tools as zoning and land-use planning. There have been bolder and more spectacular efforts--the rebuilding of downtown New Haven, the rebirth of Pittsburgh's Golden Triangle, the execution of New York's Lincoln Center, and so on. These great schemes of bold and aggressive doers have added hope and cheer to those of us who cherish the vitality of the cities. (Vernon, R., 1967, pg. 67).

Business responded first although it could not have managed without a cooperation with and help from municipal/governmental institutions (particularly as far as expropriation of the land is concerned). Federal legislation for urban renewal programs constituted precedents and legal bases for such an action. Although New Haven is regarded as the first area of an urban renewal in this country (1954)¹, the downtown renewal has not been completed yet so the Golden Triangle in Pittsburgh is more likely to be recognized as the first completed project which opened the series of downtown renewals.

It would be interesting to trace the architectural genealogy of the

new American city centers. There are two famous projects which are most often cited as the prototypes: Rockefeller Center and Victor Gruen's plan for downtown Fort Worth.

It was Siegfried Giedion who first realized the historical significance of Rockefeller Center, prophesizing back in 1941 that Rockefeller Center would point the way to the new civic center..."a public place which, like the agora of Athens, the Roman Forum, and the medieval cathedral square, will be the community focus and the popular concourse."²

The authors of the "first generation" of new American centers, however, were apparently more influenced by the Gruen plan³ which, although never implemented "...is the only unborn baby who had hundreds of grandchildren." (Von Eckardt, 1967, pg. 328).

At Fort Worth he (V. Gruen) attempted to turn an entire existing downtown business district into a pedestrian oasis. The plan was thoroughly convincing and much like Coventry's, except that at Fort Worth most existing buildings would have been left standing. Goods and services would have been brought into the car-free district by underground tunnel at basement level. Pedestrian circulation would have been helped along with slow-moving electric carts. The plan was defeated mainly by the local parking-lot operators, a powerful enemy of pedestrians in any city. (Von Eckardt, 1967, pp. 327-8).

The impact of Rockefeller Center was less direct. It is very likely that first it might have inspired architectural concepts in Europe and then in the late 1950's, or even later, been re-imported by the megastructural approach.

III.2. Brief Review of Selected Examples of Downtown Renewal

For the purpose of this study, I have chosen several examples of new city centers which I have found to be distinctive and helpful in illustrating

the evolution of the architectural approaches to city centers and in showing the changing concept of the main open space in these centers. These selected cases are:

- 1) Rockefeller Center, New York
- 2) Penn Center (later called Market East Transportation Center), Philadelphia
- 3) Constitution Plaza, Hartford, Connecticut
- 4) Charles Center, Baltimore
- 5) Renaissance Center, Detroit
- 6) World Trade Center, New York
- 7) Faueuil Hall Market, Boston

III.2.1. Rockefeller Center, New York⁴

Conceived in 1931 and largely built in 1932, Rockefeller Center is often regarded as the most successful civic center so far completed in this country. Designed by Reinhard and Hofmeister, Corbett and Harrison and McMurray, Hood and Fouilhoux, it represents one of those examples where the strong initiative of "enlightened private enterprise" was combined with really creative design which presented the pioneering approach to pedestrian space.

Writes A. Heckscher:

To this day nothing surpasses it (Rockefeller Center) in the way open areas are molded and spaces contained or released with deliberated art. The placing of the low buildings in relation to the higher, the subtle changes of scale and level in the areas between the building, develop all the dimensions of outdoor space. The system of arcades below the street creates a new pedestrian world. The linkages to the surrounding community were given much thought. Not only was the center situated at the heart of a vibrant network of streets and avenues, but its planners hoped to break through the existing street structures to the north, cutting a midblock walkway to Central Park. In this they were unsuccessful, but a generation later they tied to the original system of

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spaces and tunnels, no plazas across the Avenue of the Americas. (A. Heckscher, 1977, pp. 309-310).

There is consensus among architectural critics that one of the strongest assets of Rockefeller Center is the way in which its network of pedestrian spaces is woven into the urban fabric. As R. Stern points out, Rockefeller Center "...remains a preeminent example of what urban design can achieve with the grid pattern of development with linked underground concourses, and a major defined green space with a shop-lined mall leading to a skating rink and restaurants, all related to those passages and to the streets." (R. Stern, 1969, pg. 99).

Wolf Von Eckardt is most explicit in expressing the historical significance of this project: "For the first time in the history of the modern city they rescued the hapless biped from the automobile. And they thereby returned us another very good reason for going downtown besides earning or spending money." (Von Eckardt, 1967, pg. 318).

III.2.2. Penn Center (later Market Street East Transportation Center), 5 Philadelphia

The first project of Penn Center was proposed by the City Planning Commission in 1952. The Center included a long, multistory shopping concourse which was contrasted and articulated by three towers. The concept of vertical traffic segregation, with pedestrian movement below the street was a distinctive feature of this project and, although the initial proposal was rejected, the principle of vertical traffic segregation remained almost unchanged throughout the whole development of the design idea (about a quarter of a

century). During this period various architectural firms have been involved in the design of Market East.⁶ In 1969 J. Bower took over and he was appointed by the Redevelopment Authority as the coordinating architect for Market East. So far the completed part is The Gallery ("The Rouse Gallery") developed by the Rouse Company.

Market Street East is built on a transportation hub which will include: commuter railroads, high speed rail line, subway, buses, streetcars and automobiles. It will be tied together by a three-level pedestrian walkway system through an air-conditioned skylit shopping mall. The base formed by the mall, commercial space and parking will be surmounted with a major air-rights development of office and hotel use. (Redstone, 1976, p. 163).

Market Street East Center may be considered as the scheme which continues the megastructural approach of Rockefeller Center⁷ but with two distinctions: First: One can describe the pedestrian movement pattern of Market East as linear ("street for people"), while in Rockefeller Center this pattern is of broader network type.

Second: In Market Street East Center, vertical traffic segregation is more developed since it includes more modes of transportation (7 modes!). Maybe it is the reason that Market East Center, Philadelphia is one of the most often cited examples of the traffic segregation in literature.

Market Street East opens a new chapter in the designers' search for the new model of the American street which could be called as "the street for people." This street is identified with the mall which is:

...a great, sunlit, urban 'people chamber' served by train and subway below and connected by escalator to the street and to the office and bus access level below. In the final analysis, the true worth of Market Street East will be the degree to which it successfully provides a series of harmonious spaces for people. Market Street East must provide that which is so lacking in our city streets today--a place where persons alone or in great numbers can find the inspiration and desire to participate once more in the full life of their city. (Redstone, L. G., 1976, p. 164).⁸

As opposed to Rockefeller Center, "Penn Center in Philadelphia was more directly the product of municipal impetus and the support of two strong Mayors, Joseph Clark and Richardson Dilworth, but the achievement would have been impossible without some cooperation from the Pennsylvania Railroad..." (Burchard, J. 1968, p. 232) and recently the involvement of Rouse Company (which has a ninety-nine year lease from the Philadelphia Redevelopment Authority for the Gallery) was significant for this stage of implementation.

Finally, the remark of a more theoretical nature. Edmund Bacon uses Penn Center as the example which helps him to illustrate two concepts. First--The idea of "simultaneous movement system" which constitutes the essential concept of his approach presented in the book "Design of Cities"⁹ and second--the process of design itself, that is, a cyclical feedback in decision-making (Bacon, E. 1974, pp. 254-262 and 302-3).

III.2.3 Constitution Plaza, Hartford, Connecticut

Constitution Plaza, designed in the 1950's by arch. Du Bose and built in early 1960's, provides one of the most controversial examples amongst those new centers with a spatial concept based on the major open space which supposedly should resemble the European plaza.

In the case of Constitution Plaza, however, the concept of a main open space represents certain modifications relevant to the needs of the "automobile era" but which turned out to have serious and rather negative consequences for the use of space.

The base of the plaza is formed by the platform which "houses automobiles" so that the main open space creates a kind of podium flanked by the towers among which are Wallace Harrison "doubleender" for the Phoenix Life Insurance Company and Skidmore, Owings and Merrill's adjunct to Travelers' building. (Heckscher, A., 1977, p. 311).

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In the case of Constitution Plaza, however, the concept of a main open space represents certain modifications relevant to the needs of the "auto-mobile era" but which turned out to have serious and rather negative consequences for the use of space.

The base of the plaza is formed by the platform which "houses automobiles" so that the main open space creates a kind of podium flanked by the towers among which are Wallace Harrison "doubleender" for the Phoenix Life Insurance Company and Skidmore, Owings and Merrill's adjunct to Travelers' building. (Heckscher, A., 1977, p. 311).

Lavishly spacious (too spacious actually) and diversified in levels, the plaza is thoroughly landscaped. "Landscape architect Hideo Sasaki has garnished it with a forest of potted trees and other greenery, a fountain, a clock tower, a variety of different pavements, benches and vistas." (Von Eckardt, 1967, pg. 331). According to Wolf Von Eckardt, these are the elements which make Constitution Plaza "...such a pleasant environment to be in..." despite the fact that, as he stated himself in his preceding sentence "...a platform over a big parking garage lined with big office buildings--for instance, has little to offer but one hotel and some very dull bank and brokerage establishments (ibid.). Yet he cites Constitution Plaza along with Philadelphia's Penn Center, Pittsburgh's Golden Triangle, Boston's Government Square, Denver's Mile High Center, Baltimore's Charles Center, etc., as one of the "more spectacular results" of the downtown renewal. But he also adds that most of them "...are conceived of and function as, gleaming new islands that stand apart from the rest of the city. These are not fully and carefully woven into the city's texture part of the city's ecology." (Von Eckardt, 1967, pg. 322).

August Heckscher is more critical. Analyzing the spatial concept of Constitution Plaza he points out several elements due to which "...it fails to attract the foot traffic essential to its life..." so that "...only in the finest weather and during public ceremonies does it draw people other than office workers from the building themselves." (Heckscher, 1977, pp. 310-11). According to A. Heckscher, the reasons of this failure are:

Unfortunate Location (the plaza lies at the edge of downtown)

Lack of Sufficient Pedestrian Linkages (especially "the pedestrian bridges that should have tied it with the city major retail area.")

Concept of the Plaza as a Podium (since the podium is higher than the

street level it "requires a psychological effort to mount to it.")

Robert A. M. Stern goes even further in his criticism of Constitution Plaza. For him it is:

...atypical of this mistaken desire to open up the dense core of cities, where a kind of cloud-cuckoo land of irrelevant plazas and levels two floors above the street and accessible only by steep flights of stairs, divorced from the life of the city and without sufficient life to sustain itself, has been produced, removing rather than renewing the life of the place. (Stern, R., 1969, p. 92).¹⁰

III.2.4. Charles Center, Baltimore

The history of this development, regarded as a catalyzing part for the whole area of the Metro Center, Baltimore, dates back to 1957. Charles Center is also cited as the example of a successful cooperation between the private and public sectors and often it is praised as an accomplished urban composition and accepted even by such opponents of Modern-orthodox architecture as Jane Jacobs.¹¹

According to the authors' objectives, Charles Center was expected to provide a wide spectrum of downtown uses ranging from commercial to cultural to residential. The authors of the spatial concept of the whole center are: D. A. Wallace, G. Kostritsky, W. H. Potts, Jr. The landscaping of public plazas was designed by RTKL. The concept was revealed in 1958.

Charles Center is "The unified complex of office building towers linked together by an elaborated system of pedestrian walkways, plazas and retail shops. It also includes a hotel, a theatre and two high rise apartment towers."¹² One of the landmarks of the center is One Charles Center designed by Mies Van der Rohe.

Two among other design objectives are worth to be mentioned here. One is--an attempt to provide the links of continuity with the CBD by leaving some sound old structures standing. Another, strongly emphasized, is to create open space that would be "active and useful to the public and attractive.

Therefore spaces between buildings were regarded as the basic design theme for Charles Center."¹³

Unfortunately, in my opinion, this is a point where the center failed despite a lot of good design and the interesting elements of landscaping. Comparing the open spaces of Charles Center with most of European plazas, and even some more successful plazas in this country, one can say that most of the time they are rather empty, almost dead places. Although the authors examined many precedents (including the examples of European plazas) Charles Center cannot be regarded as the City Forum. The activities of this place are still of a limited scope and it functions temporarily, i.e., mostly during lunchtime, or during special events. Charles Center, although thoroughly designed, gives the impression of being an interesting stage but without actors. Like many other plazas in American downtowns, Charles Center Plazas seem to be somewhat a luxurious and prestigious good, functioning as a symbol of powerful private enterprise rather than a meeting place for people.

As we have said, the system of open spaces in Charles Center is based on plazas supposedly connected through elevated walkways. Let us try to find the answer as to why it does not work the way that it was expected.

There are a couple of interpretations possible. First, and the most general answer to this question is that the concept of plaza as such, is of dubious validity because it introduces the elements artificial for an American urban fabric and this "European transplant" in most cases has been rejected by American social environment, i.e., everyday patterns of behavior. Second possible explanation is that external, and to some degree also internal, pedestrian linkages of Charles Center are not sufficient either because of certain imperfections in the design or as a result of the particular

implementation of the plan for the whole area of the Metro Center. The third likely interpretation is that Charles Center is still lacking certain uses which are necessary to attract and generate strong pedestrian movement.

The first possibility will be discussed later, at the end of this chapter, since it is one of the main arguments in the criticism of new downtown projects and R. Venturi's attack on so-called "piazza compulsion"¹⁴ may exemplify this discourse in a best way.

The second probable answer is, as I pointed out, more specifically relating to the Charles Center case. It is quite likely that Charles Center, as a complex, is relatively isolated from the residual part of the Metro Center due to certain functional inconsistencies resulting from the particular phasing of the Metro Center. Metro Center, Baltimore encompasses the area larger than downtown and includes, among others, such focal points as: Charles Center, Inner Harbor, Retail Center (Lexington Center),¹⁵ Financial and Municipal Centers, Mount Vernon, etc.

The spatial layout of Charles Center emphasizes a N/S direction. Three plazas are situated on this axis, which supposedly links Mount Vernon, Charles Center and Inner Harbor, while the main corridor of pedestrian circulation goes along the E/W axis, crossing Charles Center at the northern edge of the Center Plaza. This is because the predominant generators of pedestrian movement are still located west and southeast of Charles Center. Presumably, the layout will be more balanced in terms of pedestrian linkages with the completion of the Inner Harbor Development.

Looking at the use of the main open spaces of Charles Center we can also notice that despite pedestrian linkages designed they seem to be fairly separated so that, in fact, the whole internal pattern of open spaces

is not so much integrated as it looks on the map. Possibly it is due to the imperfections of the design of pedestrian walkways. Elevated and mostly unroofed skywalks apparently create a kind of psychological barrier since they are much less frequently used than pedestrian crossings at the street level. Should roofing and equipping them with some special commercial activities animate these constructions--let us, for the time
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being leave this question open.

The third point of this interpretation raises the question of mixed uses. Although, as it was mentioned at the beginning, the project assumed a "wide spectrum of downtown uses" Charles Center is still lacking reinforcement by the increase of retail, residential and leisure-type activities. Perhaps mixed uses and concentration of almost all major urban activities in and around one place, i.e., the main market square, made the centers of
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European cities so lively and animated. But the answer is not so simple as it looks. Retail and commercial uses existing so far in Charles Center are too much of exclusive types since they are oriented mostly to executives and mid-management kind of CBD employees. Small, less exclusive shops and such facilities as cafes, bars, clubs, restaurants etc. could help to increase the diversification of activities and to animate the place but those small businesses would quickly get into economic difficulties not having enough clientele which could easily happen since, as it was pointed out, the place is far from being crowded. In that way, we have arrived at a vicious circle. The conclusion: Diversification of commercial activities could hardly be achieved without an impetus from other forces. Recreational activities may be considered as one of those forces. The success of various cultural and entertaining performances, ethnic festivals and other kinds of

special events, which gathered thousands of people either in Charles Center or the Inner Harbor (especially during the City Fair), proves that this could be the real force of attractiveness for Charles Center.

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III.2.5. Renaissance Center, Detroit

As was mentioned at the beginning of this chapter, the tradition of "enlightened private enterprise" as the "shaper of cities" goes back to 1930 when..."Big business and all that makes New York City the 'Big Apple' come together to compose Rockefeller Center." (Cutler, S., 1976, pg. 20). Renaissance Center, Detroit, represents the same kind of initiative. This time it was provided by Henry Ford (later followed by General Motors and other investors) and coordinated under Detroit Renaissance, Inc. (established in 1970). For design Ford engaged architect John Portman who is famous for his projects for downtowns in Atlanta and San Francisco (Heckscher, 1977, pp. 307-310). The first stage of the whole project completed so far (and opened to the public in May 1977) may be considered as a latest exemplification of ¹⁹ megastructural approach both in terms of scale and functional disposition (relatively mixed functions concentrated under the unified structure and with vertical traffic segregation). This complex includes Detroit Plaza Hotel... "a glass-walled cylinder seventy stories high flanked by four octagonal office towers of thirty-nine stories each; the whole set on a podium which is described as containing within its five levels enormous interior vistas, covered walkways, escalators, gardens, fountains, promenades, speciality shops, theatres, and restaurants." (Heckscher, A., 1977, pg. 106). The second phase of the Renaissance Center will include a river-front housing development. The Detroit Riverfront Complex will also extend west of the Ford Auditorium and the new

focal element of the whole composition will supposedly be created by the multi-level series of pyramidal shapes of the Civic Center Plaza. (Redstone, 1976, pp. 132-135).

Despite highly intensified attractions provided by architecture and activities performed, the Renaissance Center also raises some doubts concerning urban form and function.

In terms of urban form, this complex creates maybe one of the most powerful and at the same time artificial citiscape, resembling more the forms from a science-fiction movie than a living city. Both Redstone (1976, p. 136) and Heckscher (1977, p. 106) indicate the isolation of RenCenter. Although this complex will undoubtedly contribute to the increase of retail trade volume in the inner city and will generate a large convention trade, it does not contribute much to the solution of the basic problems of downtown Detroit. At the present stage of implementation, Renaissance Center is still only one among other focal points of the downtown, "one of these active and important areas separated from the others and the downtown by deteriorated areas--veritable 'no man's lands.'" (Redstone, 1976, pg. 136).

III.3. Classification of the Spatial Patterns of New American City Centers

Evolution of Architectural Concepts and Approaches toward Downtown Open Spaces.

Analysing the examples of new city centers which have been discussed so far, we can distinguish two basic types of spatial patterns. These are called here: "Plaza Type Centers" and "Megastructural Centers."²⁰ Both of them, however, have a common denominator--they represent downtown renewal--that is the action which brought into existence a number of large-scale projects.

But in the early 1970's, the situation changed. Different economic conditions, general concern with energy limitations and new ideas, a greater orientation toward cultural heritage, gave way to the new approaches to downtown design which are known, under the common term, as downtown revitalization. The projects reflecting this tendency belong to the third pattern of our classification. Before we come to this pattern, let us summarize the characteristics of those already discussed.

III.3.1. Plaza Type Centers (Examples, III.2.3, III.2.4)²¹

Victor Gruen's plan for downtown Fort Worth, Texas (1956) was probably the prototype of this pattern. In terms of architectural style, this new center represents Modern-orthodox architecture based mostly on the Bauhaus' tradition. The characteristic feature of the spatial disposition is that building masses are clustered around the main, open space-plaza (sometimes, as in Charles Center, a couple of smaller plazas linked through walkways.).

Although inspired by European examples, American editions of plazas differ significantly in function, form and in the way in which they are used by people. In American plazas, uses are less mixed than in European cases (where the Forum, office plaza and market square are often mixed). It is usually an office building plaza; probably less accessible due to the downtown traffic congestion and ineffective mass transit and insufficient pedestrian linkages with urban fabric. The American plaza usually houses automobiles (as a platform/roof parking garage), it is often a rather empty place in spite of attractive furnishings and it does not usually have an arcade.

III.3.2. Megastructural Centers (Examples, III.2.2, III.2.5, III.2.6)²²

We mentioned here that Rockefeller Center was the prototype of this pattern but it was also influenced by such "ideologies" as Archigram, Metabolists and the experiences with American shopping centers which also contributed to the development of this kind of center. Finally, there must have been, as well, a kind of transition from the first pattern (plaza-type) to a megastructural one, so it is difficult to make a demarkation between those

two types and the division which has been proposed here is somewhat conventional. Even Rockefeller Center, here considered as the prototype of megastructural centres, could also be, because of its plazas, placed close to the first pattern. One may just as well classify in a similar way the Embarcadero Center, San Francisco, which could even be called the "Rockefeller Center of the West Coast."²³

Megastructural approach expresses the next stage in the evolution of large-scale projects for city centers and it is very likely that for quite a long period these centers have established a kind of apogee in the large-scale action for the downtown redevelopment, almost announcing the limit to the growth of economy.²⁴

What makes the difference between the "plaza oriented center" and the "megastructural" one is the degree of spatial concentration, functional integration and also the scale. But the concept of the main open spaces has undergone certain modification as well. Instead of the open plaza, the focal element is constituted by a sort of semi-open space that is: multipurpose, usually multilevel and air conditioned skylit malls.

There is also a higher degree of internal integration provided by the dense network of pedestrian linkages like elevated roofed skywalks and underground pedestrian concourses.

In terms of style, this highly concentrated and multipurpose structure seems to have reach the apogee of monumental design (as far as twentieth century architecture is concerned). Vertical masses, although still abstract and even puristic, accordingly to the canons of Modern-orthodox architecture, often follow the symmetry as the principle of composition so that they can better express the power of those who own them. These prestigious towers

sometimes (e.g., in the case of RenCenter), look like grandiose abstract sculptures symbolizing American self-confidence based on high technology or maybe even fascination with science-fiction. When we compare those two patterns of the city center which have been discussed so far we can find at least two common features--one positive, which is traffic segregation, another negative--that is the isolation of the city center from the urban fabric of the downtown (with few exceptions like Rockefeller Center, The Rouse Gallery, Philadelphia).

Almost all these examples are successful in the separation of pedestrian movements from the vehicular traffic by means of elevated bridges or underground concourses but, at the same time, this system itself has not been sufficient enough to provide strong external linkages so most of those examples are considered as "islands."²⁵

Before we come up with the description of the newest tendencies in the design of city centers, or rather the redesign of the downtown, let us summarize the criticism which has arisen about the downtown renewal. I believe that the arguments which were used on that occasion can be useful as a sort of background for the better understanding of the origin of these new approaches named as "those various R's" i.e., revitalization, rehabilitation, recycling, reuse, etc.

III.4. Criticism of Downtown Renewal : Social Aspects

Probably the social aspects of downtown renewal (and urban renewal generally) raised up the strongest criticism. Urban renewal has usually meant the push out of underprivileged inhabitants so that the action soon has also become known as "urban removal." It was possibly the only "contribution" of new projects to the social fabric of the downtown. It is very unlikely that in terms of everyday activities, not special events, new plazas and malls

improved the quality of life of the downtown inhabitants.

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Functional Aspects

There is consensus among critics that most of the downtown renewal projects (with few exceptions) resemble "islands" surrounded by "no man's land." As it was pointed out, this isolation has several meanings. They are isolated because of bad accessibility due to traffic congestion combined with an ineffective rapid transit but also spatial and functional linkages between particular focals of downtown which are scarcely visible and the flow of pedestrian activities between particular focuses is fairly limited.

Some theorists, like E. Erber, argue that "The inner city is likely to survive for his historical epoch, but with vastly changed functions." (E. Erber, 1974, pg. 39). A. Heckscher specifies this postulate with respect to the downtown:

If the central city was to survive, a massive reconstruction of downtown was plainly essential. Basic to such a reconstruction would be the shaping of new open spaces and open space systems. Nothing could get started, however, as long as earlier ideas about the nature and function of downtown continued to dominate the minds of planners and builders...What did 'downtown' in fact mean to the older generation of urbanist and city dwellers? It meant the shopping area of the city... Everyday perceptions of the citizen were reinforced by urban economists. In a view characteristic of the 1950's, an autocratic article defined the central business district in such a way as to exclude governmental and cultural institutions on the ground that these are not 'business enterprises.' and later: 'Retail areas of the central cities were, as it happened, the first to be hurt by the suburban exodus. Shopping facilities were quick to trail the fleeing residents, and only later were they followed by other services, by entertainment, and finally by the offices and factories that supplied jobs...The traditional downtown thus received a blow in the very area where it considered itself supreme. If the central business district was not to be a focus of a retail trade, what was it to be? The answer, made evident within the decade of the 1960's, was that the downtown had a far more complex and diverse function than had earlier been acknowledged. It was a center for shopping, yes. But it was also a center for government, for the arts, for education, for voluntary institutions, for wide-range banking, insurance and financial services. It was a forum for the kind of human interchange required by modern business transactions. It was a magnet for tourists and conventions. It was a place where at some stage in the life

cycle many people would choose to live. These various functions, overlapping and in their physical embodiment often combined, constituted a new kind of downtown with a dense and compact spatial organization. (A. Heckscher, 1977, pp. 244-5).

But one may ask if the answer was really made so clear? The analysis of particular examples indicates that there are still some questions to be answered. Discussing the Charles Center case, I have shown that commercial functions are still of limited scope and those related to leisure time (cultural facilities, entertainment and recreation) although encouraged and increasingly introduced, are not developed to such an extent that could animate the center permanently.

Urban Form

There are two issues usually discussed here. One, of the more general nature, refers to the architectural style of new centers, *second in the concept of new centers*.

It is understandable that after several decades, when American architecture was dominated by the "international," modern-orthodox style, originated in the Bauhaus School, the reaction against its puristic canons must have come up. It appeared in two directions or, as one may put it, two aesthetics. One, more recently oriented towards historical heritage in architecture such as Frank Furness' work, the Chicago School, etc. *another* seems to recognize the aesthetic which has developed in this country *is* perhaps even more representative for and relevant to its mass culture and typical cityscape (e.g., commercial strip). In early 1960's this "new aesthetic" reached "the rank of nobility" being recognized as art under the name of "pop art." Soon it found its advocates also among some architects with Robert Venturi as the leader and their own slogans like: "Ugly is Beautiful."

Second point in this criticism, however related to the first one, refers to a specific element of new centers, namely, to plazas.

There is no consensus on the contribution of the "plaza-movement" to the American downtownscape. For example, John Burchard writes: "The modern plazas were perhaps started in American by the Rockefeller Center project of 1931 and given the nudge by Lever House in 1952. Now they have multiplied and new ones are in various stages of planning. None is perfect but each has contributed enormously to the good character of its city." (J. Burchard, 1968, pg. 232).

But the plaza concept also has ^{its} ~~strong~~ adversaries. Robert Venturi is probably the strongest antagonist of plazas in new American city centers:

Another crutch of Modern architecture is the piazza compulsion derived from our justifiable love of Italian towns. But the open piazza is seldom appropriate for an American city today except as a convenience for pedestrians for diagonal short-cuts. The piazza, in fact, is "un-American." Americans feel uncomfortable sitting in a square: they should be working at the office or home with the family looking at television. Chores around the house or the weekend drive have replaced the passeggiate. The traditional piazza is for collective use as well as individual use, and public ceremonies involving crowds are even harder to imagine in Copley Square than passeggiate. Our square therefore is not an open space to accommodate non-existing crowds (empty piazzas are intriguing only in early de Chiricos), but to accommodate the individual who comfortably walks through the maze and sits along the "streets" rather than in "piazza." We are in the habit of thinking that open space is precious in the city. It is not. Except in Manhattan perhaps, our cities have too much open space in the ubiquitous parking lots, in the not-so-temporary deserts created by Urban Renewal and the amorphous suburbs around. (Venturi, R., 1966, pg. 133).

Constance Perin is even more general in criticizing the plaza-movement:

The historical European reasons for the plaza--as the sole source of water, as the marshalling yard for baroque ceremonies--do not exist within urbanized society. Yet designers and critics will demand a plaza "in order to create a sense of community" and so we make large commitments of public funds to perpetuate yet another pathetic fallacy in design. We have not faced the reasons why most public open space gets relatively little use, and if we were to, then we would have to begin an anthropological and sociological inquiry into leisure activities, the components of moral and consensus, shopping, car use, kinship patterns, and the changing role of women in the work force. But the pathetic fallacy here led

us away from the kinds of public policy that might indeed help to fulfill the human needs for a sense of community: much larger indoor living space for small-group meetings; a huge increase in investment in public television; more stoops, free postage and telephones, new public holidays and rituals. (Perin, C., 1970, pp. 40-1).

But the results of an anthropological and sociological inquiry are not available yet (assuming they would provide us with any specific answer) so let us go back to the area of the new downtown.

As Robert A. M. Stern points out, plazas are not only artificial in the American environment, but they focused too much of the architect's attention at the expense of the street and the highway. (Stern, 1969, ³¹pg. 93).

In certain cities (New York for example), some of the plazas reflect zoning regulations introduced in the early 1960's. As R. M. Stern indicates, in the large part of Manhattan this contributed to a "...general break-down of the essential character of the place. As a result of the zoning ordinance, adopted in 1961, the old urbanistically sound pattern of dense blocks of buildings gradually diminishing in size as they rise to slim, free standing towers;" "a graphic expression of metropolitan pressure" as British architect James Stirling observes, (and a pattern capable of generating linked pedestrian arcades along streets and through blocks) "has been replaced with a pattern of free-standing towers in mini-plazas which are unrelated to any overall plan for open space and are, in fact, for a good ³²part of the year, merely drafty and dusty." (Stern, 1969, pg. 98),

One should also look upon the downtown renewal program in terms of its economics or even, as D. Harvey argues, symbolic implications. Writes D. Harvey (1973, pg. 280)

Urban renewal in the United States had an overt symbolic

as well as an economic function. It was (and still is) designed to create confidence in the dominant institutions of capitalist society and in so doing made selfconscious use of an ancient technique for projecting "images of cosmic order onto the plane of human experience, where they could provide a framework for action." (Wheatley, 1971, pg. 478, from Harvey, D., 1973, pg. 280).

Conclusions--Contradictions in Planning and Design Ideology; From Deterministic to Probabilistic Approach

In the previous chapter, I have discussed the two "generations" of new American city centers. I have shown that downtown renewal dramatizes contradictions in the social and spatial urban fabric; and since renewal programs also performed certain symbolic functions, we may look upon a new downtownscape as a symbol of spatial and economic contradictions. New downtowns also exemplify the evolution which took place in the philosophy of urban space. My use of the word "philosophy" emphasizes not only the design concept (of an open space) but also a particular planning assumption regarding the spatial and functional structure of metropolitan areas. The "classical" planning approach has been based on the following reasoning.

"If action x (renewal) is undertaken, the result y (downtown = a vital place) will occur. In other words, it was assumed that creating an 'attractive' place (or places) would bring people back to downtown which would in turn result in the recovery of business activities there." This implies that the "attractiveness" of downtown is highly placed in the hierarchy of values of American society. The theories of American suburbanization, however, which interpret urban form through the structure of cultural values (W. Alonso 1964, M. Webber 1967, B. J. Berry 1976) suggest that just the contrary is the case. The above confrontation suggests one more contradiction of downtown renewal: a contradiction between the assumed and actual system of values which governs the quality of urban life in America.

If we agree to regard cultural values as the elements of "context" (using this term in the way it was defined by Christopher Alexander (1964, 1967), we must admit then that in new American centers there is a mismatch

between the form and the context. Cultural values, however, constitute only one part of a behavioral system which encompasses such elements as perception, cognition, images, meanings, symbols, values, and various observable patterns of activities.

The numerous discrepancies between actual and expected use of space, and the false, implicit assumptions of behavioral motivations, indicate that both urban design and planning have often undermined the complexity¹ of the feedback between a behavioral system and the built-up environment. During the last two decades, however, we have seen a growing concern with the behavioral aspects of particular features of the man-made environment accompanied by the rapid development of certain behavioral disciplines such as environmental psychology, and cultural anthropology. Consequently, behavioral approaches tend to play an increasingly significant role in the theory of urban form and the methodology of urban design.

The question arises, to what extent can this behavioral input to urban design increase the impact of a designed environment on the individual's behavioral patterns? This issue seems to be even more complicated, since the old deterministic assumptions of spatial behavior, to which I referred earlier, have been replaced by a probabilistic approach. In a new, modified version, the problem could be defined as follows:

There is a certain probability that changes in the built-up environment will induce desired changes in behavioral systems, provided that the design is oriented to specific elements of those systems. The probability of a good fit between those two changes depends largely upon the accuracy with which we can define human behavior. As was pointed out in an earlier argument concerning downtown renewal, the misinterpretation of behavioral systems in metropolitan American resulted in (among other things) functional

contradictions. Consequently, in most instances, planners failed to achieve their objectives. This does not necessarily mean, however, that the proper interpretation of a behavioral system would automatically solve all the contradictions. First of all, behavioral patterns are not so easy to define--particularly for such a pluralistic society as the American. Despite this scepticism, it is my conviction that any comprehensive program which plays with man's behavioral system should attempt to approximate its elements and interrelations in order to increase the probability of success. This supposition has led me to supplement my analysis of downtown renewal with an overview of the literature concerning the relationship between behavioral and spatial settings.

Appendix--Environmental Behavior and Urban Design: Literature Overview

This review covers an area overlapping two fields: the methodology of urban design and those disciplines which are concerned with spatial behavior. The term "spatial behavior" is used here in a broader sense than in behaviorism, and includes an observable activity pattern as well as perception and cognition (J. Lang et al., 1974, p. 11). The components of spatial behavior can be divided into two groups:

1. Environmental perception and cognition in a general sense includes both visual images and "sensing" of the environment, and also categories such as meanings, symbols, attitudes, and values.
2. Concepts which explain some observable patterns of human behavior (territoriality, personal space, privacy, crowding, etc.). Our topic is broad, and we will be concerned with the literatures of environmental psychology, anthropology (particularly cultural anthropology), sociology, urban geography, aesthetics, and even linguistics and semiology. This overview is thought to fulfill a dual role. One is explanatory, since the aforementioned disciplines may help us to understand the behavioral aspects of urban form.² Secondly, such a review can play certain practical roles in contributing to a "design methodology." Although, as was noted, the application of those theories and concepts is somewhat limited, at least they can improve the definition of a given design problem.

Analyzing the process of design, Christopher Alexander distinguishes two patterns:

--the unselfconscious, a self-adjusting process, which has emerged

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in the unconscious culture³ and where its action allows the production of well-fitting forms to persist in active equilibrium with the system" (C. Alexander, 1967, p. 55)⁴.

--the self-conscious process or the design in the self-conscious culture is almost impossible to define under one common pattern.

The more complex the functional problems to be solved, the more complex the design process becomes. Consequently, during the past decade there has been an observable tendency, within a design profession, to make this process more explicit and based on scientific methodology. As a result, a number of different normative models have emerged which can be divided into two categories (J. Lang, 1974, p. 9):

--operational models, based on operations research and the management sciences (J. Lang, C. Burnette, 1974, pp. 43-52).

--"linguistic models," that have been influenced by the analogies between design and language (C. Alexander, 1970, pp. 52-60; 1974, 1977).

In this paper, I will concentrate primarily on the "linguistic approach," which originated from a behaviorist approach to urban form. Thus, we shall look at urban form as an opportunity for perception and emotional responses and activities.

Environmental Perception and Cognition

There is no generally accepted "theory of perception and cognition." In particular, it seems to be rather difficult to make a clear distinction between those two processes (R. Arnheim, 1969, pp. 13-17; R. M. Downs; D. Stea, 1973, p. 13). J. Lang and C. Burnette (et al., 1974, p. 83, and p. 86) distinguish between perception and cognition--defining perception as..."the process of

obtaining or receiving input" (information from the environment) while... "cognition is the throughput process involving thinking, remembering, and feeling..." and also symbolic knowledge, learning and mental development.

R. M. Downs and D. Stea (1973, p. 14) emphasize that perception is

the process that occurs because of the presence of the object, and results in the immediate apprehension of that object by one or more of the senses. Temporarily, it is closely connected with events in the immediate surroundings and is (in general) linked with immediate behavior.

The separation of perception from cognitive processes has been questioned by R. Arnheim, a prominent Gestalt psychologist, who contends that cognition includes perception. Visual perception, on the other hand, is visual thinking...

cognitive operations, called thinking, are not the privilege of mental processes above and beyond perception but the essential ingredients of perception itself. I am referring to such operations as active exploration, selection, grasping of essentials, simplification, abstraction, analysis and synthesis, completion, correction, comparison, problem solving, as well as combining separating, putting in context. These operations are not the prerogative of any one mental function; they are the manner in which the minds of both man and animal treat cognitive material at any level. There is no basic difference in this respect between what happens when a person looks at the world directly and when he sits with his eyes closed and 'thinks.'

By this I mean all mental operations involved in the receiving, storing, and processing of information: sensory perception, memory, thinking, learning. This use of term conflicts with that to which many psychologists are accustomed and which excludes the activity of the senses from cognition. It reflects the distinction I am trying to eliminate; therefore, I must extend the meaning of the term 'cognitive' and 'cognition' to include perception. Similarly, I see no way of withholding the name of 'thinking' from what goes on in perception (R. Arnheim, 1969, pp. 13-4).

J. D. Porteous describes the evolution which the concept of perception has recently undergone. The traditional Stimulus-Response (S-R) theory of perception defines perception in a strict neuropsychological sense as the process of becoming aware through the senses..."as the response to an

outside stimulus which, producing further stimulation within the organism, eventually results in an appropriate overt response to the stimulus" (Porteus, 1977, p. 140 and 221). According to J. Lang (1974, p. 99), S-R theories of perception can be divided into sensation-based theories of perception, and information-based theories of perception (J. Gibson, 1950, 1956, 1973). Among various psychological schools of thought, particularly significant contributions to the development of the sensation-based theories of perception have been made by Gestalt Psychology (K. Koffka, 1935; K. Lewin, 1935; R. Arnheim, 1969, 1977), transactionalism (W. Ittelson, 1970); rationalism; and nativism (J. Piaget, 1963, N. Chomsky, 1964). Traditional S-R theories, concerned mostly with a response to an outside stimulus and concentrated on observable data only, tended to ignore or underestimate the significance of cognitive processes. More recent theories seem to abandon the belief in stimulus as the main determinant of perception and pay more attention to subjective experiences (J. D. Porteus, 1977, p. 221). There is a tendency in environmental psychology, architecture, and geography, to link the process of perception with the concept of the be-
⁵
havioral environment. Porteus (1977, p. 216), for example, considers the personal image one has of the phenomenal environment as one's perception of the environment. Tuan (1974, p. 4) regards perception as "...both the response of the senses to external stimuli and purposeful activity in which certain phenomena are clearly registered while others recede...or are blocked
⁶
out."

If we agree to regard environmental perception as a personal image, at the same time we annihilate the demarcation between perception and cognition.

According to R. M. Downs and D. Stea (1973):

Cognition is the more general term and includes perception as well as thinking, problem solving, and the organization of information and ideas. A more useful distinction from a spatial point of view is offered by Stea (1969). He suggests that cognition occurs in a spatial context when the spaces of interest are so extensive that they cannot be perceived or apprehended either at once or in a series of brief glances. These large-scale spaces must be cognitively organized or committed to memory, and contain objects and events which are outside of the immediate sensory field of the individual. This scale-dependent distinction, intuitively acceptable to a geographer, also suggests that we are concerned with the nature and formation of environmental cognitions rather than with briefer spatial perceptions. (R. M. Downs; P. Stea, 1973, p. 14).

H. M. Proshansky defines "...the cognitive structure as: beliefs, values, precepts and attitudes which an individual has about actual and potential settings (Proshansky, 1974, p. 76). Such a broad notion of cognitive structure embraces also the concepts of "cognitive mapping" or "image of place."

A fundamental contribution to studies of cognitive mapping was made by Kevin Lynch (1960). In his famous book The Image of the City, Lynch examines the visual form of the city in terms of the meaning it has to city inhabitants and the way in which people structure urban form. (In this particular context, "urban form" means the visual form of the city, and may be identified with the term "cityscape" or "townscape." Kevin Lynch identifies five basic types of elements by which people form their image of the city. These imageable classes are:

Paths--i.e., the channels along which the observer moves (e.g., streets, walkways, transit lines, canals, railroads)

Edges--i.e., the boundaries which break and contain the form, the

linear breaks in the continuity of form that are not considered as paths by the observer (e.g., edges of developments, walls, shores, etc.).

Districts--i.e., the medium-to-large sections of the city which are recognizable as having some common identifying character.

Nodes--are the strategic spots in a city into which observers can enter or leave; points of intensive foci; concentrations, junctions or both. They may constitute the focus and the epitome of the district.

Landmarks--are also the points of reference, but are external to the observer (i.e., he cannot enter them) and are singled out for the purpose of identification, structuring, or orientation (e.g., towers, domes, great hills, signs, store fronts, etc.).

Lynch analyzes the ways in which these elements are structured and inter-related, and on such a basis he creates the theory of urban form (synthesis) which also includes recommendations for urban design oriented to enhance the identity and the imageability of a given urban area. According to Lynch, some of the desirable qualities of urban form are singularity (clarity, sharpness, contrast), simplicity, continuity, dominance, clarity of direction, clarity of joints, and directional differentiation. He is also concerned with the meaning of form and time series.

Appleyard (1969b) also identifies the attributes of urban form that capture attention and hold a place in the inhabitant's mental representation of his city (D. Appleyard, 1969, p. 131). He distinguishes such attributes of form as movement, contour, size, shape, surface, quality, and signs; and

establishes the attributes of visibility and significance. Examining the cognitive mapping among the inhabitants of Ciudad Guayana (a new city in Venezuela), Appleyard found distinctive differences between the spatial cognition of various groups. He classified them into two basic categories:

- sequential--if inhabitants structured their maps using roads and river barriers (a predominant form of mapping)

- spatial--where buildings and districts have been used as the basic elements of structuring.

Both types ranged from the primitive and topological, relating parts through continuity, connections, proximity, and differentiation to the more positional, locating the elements according to direction, position, and distance (Appleyard, 1969a, p. 436).

Since mobility is one of the most characteristic features of American society, special attention had to be given to a dynamic, or rather kinetic, perception. That is, the environmental perception of the observer in motion (for example, a driver's perception on the highway). From the point of view of design, the important issues are:

- to find out how environmental qualities change with motion through space; and

- to establish notation techniques which would be helpful in a design process. Some pioneering studies in this field have been done by Appleyard, Lynch, and Meyer (1964) and Halprin (1965). For E. Bacon, a kinetic perception constitutes the base of his concept of a "simultaneous movement system" (E. Bacon, 1967, pp. 34-5). A dynamic image of the commercial strip inspired the architectural philosophy of R. Venturi. However, he is more concerned with a semiotic perception rather than a formal one.

"Semiotic perception" (as opposed to visual = formal perception), is the term which is used here with reference to the perception of the meaning of environmental signs and symbols.

One of the possible methods used in analyzing the meaning of the man-made environment is the so called "linguistic approach." The linguistic approach to cityscape may well be exemplified by the "word game" offered by Grady Clay (1973), and is thought to be helpful in deciphering the imageable elements of American townscapes. Clay has developed his own urban nomenclature. "Epitome District," "Fronts," "Strips," "Beats," "Sinks," "Stacks," and "Turfs"--these are some key words of his new language of the American cityscape.⁹ He seems to have been influenced by the language of serial vision introduced by G. Cullen (1961), and the "dynamic" approach of L. Halprin (1963, 1965, 1969). Clay is very much concerned with the changes which have occurred in American cityscapes and, on this point, he has much in common with K. Lynch whose What Time is This Place can be regarded as the compendium of knowledge about the cognition of time and its relation to a cityscape. The linguistic approach as the new concept of environmental cognition and environmental design has been employed by Christopher Alexander in A Pattern Language (1977). In this case, the approach may also be described as holistic, since the concept of a Whole Environment constitutes a fundamental assumption of the Alexander theory:

The morphology of an environment is given to it by a system of endlessly repeated spatial relationships among its spatial categories, its morphological laws...Every environment gets its morphology from millions of personal acts made by builders; and these acts themselves are guided exclusively by the combination of images which the builders already have in their heads at the time of the act. This is true at every scale of

an environment; it has been true for all environments today.

When we examine these combinational systems of images closely, we find that they are exactly like human languages. Both are systems which allow a person to produce an infinite variety of unique combinations, by means of his own creative act. For this reason I call these systems pattern languages. (C. Alexander, 1974, pp. 54-55).

Linguistic/semiotic approaches to environmental cognition design may follow various philosophical systems. We can encounter the semiotic interpretations of the built-up environment made from structuralist or Marxist (e.g., M. Tafuri, 1976) perspectives or even those close to Zen-Buddhism (C. Alexander, 1974, 1977).

A semiotic approach seems to be a common denomination for the so-called "neo-avant-garde" or "post-modern" architecture which, contrary to "Modern orthodox" architecture, emphasizes such values of urban form as meanings and symbols as the components essential for a "good environment." The key issue in the dispute between those two generations and their aesthetic principles is related to such dichotomies as simplicity vs. complexity; clarity vs. ambiguity; harmony vs. contradictions. Complexity, contradictions, ambiguity, are advocated by R. Venturi (1966, 1977), A. Rapoport (1967), C. Alexander (1977). As A. Rapoport and R. E. Kantor suggest:

...ambiguity and complexity are important components of a visually 'good' environment because they help to achieve an optimal perceptual rate which is related to richness and complexity of perceptual input, and we have suggested that visual satisfaction is an important aspect of life. (Rapoport and Kantor, 1967, p. 220).

They both admit that their concept is quite close to that of G. Cullen (1961). Even if we agree to look upon the landscape, townscape or architecture as on a set of meaningful signs, the question remains--to what extent do those signs convey (a descriptive approach) or should convey

"a normative approach" a symbolic message?

The stylistic canons of Modern orthodox architecture between the 1920's and the 1960's (approximately) were more or less explicitly anti-symbolic. Writes M. Tafuri:

Destroy all the symbolic attributes accumulated by the linguistic signs, purify the signs to the point of annihilation, articulate their interrelationships on the basis of a complete freedom of relations: these are all operations depending directly on the fundamental law of systematic infraction of the rules, the law on which avant-garde theory was structured. (Tafuri, 1976, p. 156).

But, as Wheatley argues, symbolic functions have always been significant for any urban form.

Whenever...we trace back the characteristic urban form to its beginnings we arrive not at a settlement that is dominated by a commercial relations, a premodal market, or that is focused on citadel, an archetypal fortress, but rather at a ceremonial complex for religious expression. (Wheatley, 1971, p. 225).

Many other scholars studying man-environment relations contend that built-up environment has always performed symbolic functions: (C. Levi-Strauss, 1962; C. Alexander, 1964, 1967, 1977; B. Rudofsky, 1964, 1977; J. Summerson, 1964; A. F. Wright, 1965; A. Rapoport, 1969, 1976; R. Venturi, 1966, 1977; A. Strauss, 1968; D. Harvey, 1973; Yi-Fu-Tuan, 1974).

"Post-modern" architecture has rediscovered the significance of the symbol. Apparently, in some cases, (e.g., R. Venturi) the road to this "neo-symbolism" led through the experiences of pop-art. As R. Venturi writes, "Pop artists have shown the value of the old cliché used in a new context to achieve a new meaning." (R. Venturi, 1977, p. 72). Symbolic categories have helped to interpret, and to some degree even to defend, the newly emerged type of urban form, the commercial strip, and vice-versa--

commercial, vernacular architecture of the strip happened to be a vivid source for neo-symbolism.

Observable Patterns of Human Behavior--Selected Concepts of Activity

Patterns: Territoriality; Personal Space; Privacy; Crowding

Among the various factors which motivate and affect human behavior, we can distinguish several systems or sub-systems: the physiological, cultural (values, norms, traditions, beliefs), social (processes by which groups are held together), personality (predispositions, attitudes, preferences, opinions), and physical/environmental system. These components of the behavioral system define and are defined by the nature of their interrelationships; a change in one affects the other and also will be affected by them (Proshansky, 1970, Lang et al., 1974, p. 94). Some of the concepts which will be described can provide insight into the processes of environmental behavior and thus can be helpful for environmental design (however, even some of their authors (e.g., R. Sommer, 1974) express reservation and skepticism about their direct application to design).

Territoriality and Personal Space

The concepts of territoriality and personal space are interrelated. We can regard personal space as the element of territorial organization. Territoriality (i.e., a territorial control of space) possesses several functional aspects which are essential for the species' survival. Among the more or less conspicuous components of territoriality are the food component, the sex component, security (defense against aggression, spatial invasion),

dominance, hierarchy, stimulation, personalization (place as the element of self-identity) and privacy. Man "...exhibits territorial behavior to some degree, and this pattern may possibly have some instinctual base through heavily modified by cultural cognitioning." (J. D. Porteus, 1977, p. 21). E. T. Hall (1959, 1966) emphasizes the informative aspect of human territoriality, which he regards as the one of primary message systems: a "vital mode of human communication." Communication, in turn, constitutes the core of culture (E. T. Hall, 1969 p. 1). His approach may also be described as linguistic, since the general thesis of his books (1959, 1966) is that "...the principles laid down by linguists in relation to language apply to the rest of human behavior (Hall, 1969, p. 2). Proshansky associates the concept of human territoriality with the concept of freedom of choice and privacy. "Freedom of choice implies that the individual can exert some control over his physical setting, and in this regard we are confronted with the growing concern of human territoriality." (Proshansky, 1974, p. 76). Individuals, according to Proshansky, extend privacy also for the things they own. "These objects, spaces, and places, are the extensions of the individual's self--they may be the elements of his self-identity." (ibid.). In the same sense, he also writes about "place-identity."

From the point of view of design, the interesting question is the degree to which a spatial pattern should express a territoriality pattern. S. Brower (1965, p. 10). for example, argues that clear communication of a given pattern of territoriality (and acceptable) is important for a good environment. The concepts of territoriality usually assume a hierarchy of human territories. R. Sommer (1969, pp. 43-44) and J. D. Porteous (1977, pp. 27-30)

describe the various models of man's territorial organization. J. D. Porteous puts forward his own proposal, based on ethological principles, which comprises a nested series of spaces: (a) micro-space--personal space; (b) meso-space--home base; and (c) macro-space--home range (Porteous, 1977, pp. 28-30). Personal space is usually defined as the area or space (a mobile "bubble" of privacy) with invisible boundaries around the individual's body into which intruders may not come (Sommer, 1969, p. 26; Porteous, 1977, p. 31). Sommer links the meaning of "aura," that is, an emotionally charged zone around each person, and the concept of "place," i.e., a process by which people mark out and personalize the space they inhabit.

Anthropologist E. T. Hall argues that personal-space behavior is strongly rooted in man's biological past and patterned by a cultural system. "Proxemics" is the term he has coined for the interrelated observations and theories of man's use of space as a special elaboration of culture (Hall, 1969, p. 1). He has also distinguished four distance zones (intimate distance, personal distance, social distance, public distance) which may represent a kind of behavioral norm for many middle-class adults of the northeastern seaboard of the United States.

Footnotes

Chapter I Introduction

1. Cited after Wolf Von Eckardt (1967, p. 318). See also Von Eckardt's response! (op.cit., p. 319).
2. Ibid.
3. The concept of the limits to social structures and the necessity of manageable social units received also a strong support from the theory of information. See Norbert Wiener, Cybernetics or Control and Communication in the Animal and the Machine (1948/1955, pp. 184-91).
4. Here I use the division and terms introduced by Christopher Alexander in his Notes on the Synthesis of Form, 1967.
5. See remarks given by D. Harvey in Social Justice and the City, (1973/1977, Second printing, p. 280).

Chapter II American Downtownscape in the Context of the Post-Industrial City's Problems

1. This is the term coined by Brian J. L. Bery in his recent book The Changing Shape of Metropolitan America--Community Patterns, Urban Fields and Decentralization Process, 1960-1970, 1977.
2. See Trends in Metropolitan America, an information report by the Advisory Commission on Intergovernmental Relations, Washington, D. C., February, 1977.
3. See Ernest Erber, The Inner City in the Post-Industrial Era: A Study of Its Changing Social Fabric and Economic Function, in The Inner City, by Kennedy, D. & Kennedy, M. E. (ed.), New York, 1974, p. 18.
4. The explanation of the cultural roots of American urbanization is given by Brian J. L. Bery in his Decline of the Aging Metropolis: Cultural Bases and Social Process, 1975.
5. Present distribution of political power is opposed to metropolitan governments and the idea of annexation was basically rejected as being viewed in terms of the white-black power struggle, (see E. Erber, op.cit., p. 22).
6. Compare Trends in Metropolitan America, op.cit., ACIR, 1977, p. 31.
7. Compare E. Erber, op.cit., p. 31.
8. Ibid., p. 18.
9. Trends in Metropolitan America, op.cit.
10. Here is a small discrepancy between data given in Trends in Metropolitan America (from 15.6% to 19.6%) and those given by E. Erber, who estimates this increase as from 14% to 19% (E. Erber, op.cit., p. 31).
11. E. Erber, op.cit., p. 31.

12. Ibid.
13. Ibid., p. 33
14. Figure from "Report on National Growth, 1972," p. 22, Report of the President to the Congress of the United States, February, 1972.
15. For example, urban riots during 1964-68. Compare also the final comment with II.2.3.
16. See, for example, Katharine C. Lyall, "Greater Baltimore Needs and Economic Development Strategy," Metro News, The Johns Hopkins University, Center for Metropolitan Planning and Research, Vol. 4, No. 18, June 15, 1976, p. 5.
17. See Trends in Metropolitan America, op.cit., p. 6.
18. The answer is likely to depend on:
 - to what extent will it be possible to substitute the face-to-face contact by closed-circuit television
 - the ability to assemble a sufficient number of clerical employees in the outer city
 - the availability of the suppliers of external economy (see E. Erber, op.cit., pp. 28-30).

Chapter III Downtown Renewal and Revitalization

1. "In 1954, the city of New Haven inaugurated the first urban renewal program in the nation with the statement by Mayor Richard Lee that 'The basic goals of the program would be concerned with giving back to the central city the vitality that traditionally belong there.'" (Cutler, ~~4-2~~, Cutler, S.S., 1976, p. 18)

But the implementation appeared to be not so easy,"...although the site was completely cleared out at an early stage, the development was piece-meal." (Redstone, L. 1976, pp. 84-5).
2. This quotation by Giedion is taken from Wolf Von Eckardt's A Place to Live, (1967, pg. 317).
3. Victor Gruen's project of the new center for Forth Worth, Texas was published for the first time in 1956.
4. For further description of and comments on Rockefeller Center, see: Meyerson, M. (1963), Von Eckardt, W. (1967, pp. 317-8), Burchard, J. (1968, pp. 231-3), Stern, R. A. M., (1969, pp. 98-9), Heckscher, A., (1977, pp. 307-310), and Cutler S., (1976, pg. 20).
5. Abstract based on ¹description given by Bacon, E., (1967, 1974, pp. 269-95) and Redstone, L. G., (1976, pp. 163-7).
5. Among those firms were: R. Giurgola (1963/4), Skidmore, Owings and Merrill (1965) and finally J. Bower & Fradley Architects took over in 1969.
7. Stockholm center project-Sergelgatan (late 1940's, early 1950's) could have also been an inspiration for an early concept of Penn Center.
8. This quotation is taken from L. G. Redstone's book The New Downtown-Rebuilding Business Districts, 1976, from the comments for the project given by Bower & Fradley Architects.

9. The nature of "simultaneous movement system" or "path along which city-dwellers are transported" includes three concepts:

- 1) Relationship of mass and space
- 2) Continuity of experience
- 3) Simultaneous continuities.

1) it emphasizes the necessity to conceive space and movement as dominating forces. "Matter is really the produce of movement in space."

and 2) "Movement through space creates a continuity of experiences derived from the nature and form of the spaces through which the movement occurs. This gives the key to the concept of movement system as a dominant organizing force in architectural design."

and 3) "One must attempt to see the continuity of space experience in terms of series of movement systems based on different rates of speed and different modes of movement, each of these interrelated with the others and each contributing its part to the total living experience in the city." (Quotations come from E. Bacon, "Design of Cities, 1974, pp. 34-4. See also, *ibid.*, pp. 252-3).

10. See also, R. A. M. Stern, "Constitution Plaza After One Year," Progressive Architecture, XLVI, No. 12, Dec. 1965, pp. 166-71.
11. See: Jane Jacobs, "New Heart for Baltimore," Architectural Forum, June 1958, pp. 88-92.
12. See: Millspaght, Martin, (ed.), "Baltimore's Charles Center-Case Study of Downtown Renewal," Technical Bulletin, No. 51, Urban Land Use Institute, Washington, D. C., November, 1964.

13. Ibid.
14. Term coined by Robert Venturi in his Complexity and Contradiction in Architecture, 1966, p. 133.
15. This kind of polycentric pattern is a typical one for many large American cities (New York, Boston, Chicago, Washington, Detroit, etc.) It also evolved in Baltimore and was accepted as the model for the future development of MetroCenter. This concept assumes a layout constituted by nodals/foci connected through the network of linkages. See also: "Baltimore's Development Program--Comprehensive Plan/Capital Improvement Program," Baltimore City Planning Commission, Department of Planning, January 1976. See also: Metro Center, Baltimore, *1976* *McHenry & Associates*
16. Such are the design recommendations given by RTKL Associates, Inc.'s study, Pedestrian Circulation Study for Downtown Baltimore, Sept., 1975. We can read there, "The second phase of this project will provide an additional stimulus to the walkway utilization. First, the walkway will attract trips from alternative pathways (i.e., sidewalk) due to the cover provided. It should be noted that 43.3% of the respondents to the "Streets for People" cited shelter from weather as the major deficiency of the walkways." (ibid., p. 114).
17. Writes A. Heckscher: "The market place became in the European cities a space coequal (and in many instances literally unified--my remark) with those of the City Hall and the cathedral and it was like them, a scene of animation, a point of meetings, a stage for dramas and entertainments of civic life." (A. Heckscher, 1977, pp. 337-8).

18. The history of the projects for the redevelopment of CBD, Detroit, goes back to the early 1940's when the proposals for the river-front civic center were made by Eil Saarinen. In 1950, the implementation of the civic center development was begun. It included Veteran's Memorial Building, Cobo Convention Hall Arena, City-County Building, Henry Ford and Edsel Ford Auditorium. In 1958, Architects Urban Design Collaborative, with volunteers representing various architectural firms, prepared the general proposals for CBD which included such concepts as elevated walkways and "people movers." In 1965, the city was given the first AIA National Honor Award for large-scale urban design planning. (Redstone, L. G., 1976, p. 130).
19. In 1978, the most recent example will be the CitiCorp Center, New York City, (architects: Hugh Stubbins & Associates, Inc., in collaboration with Emery Roth & Sons.). CitiCorp Center includes "...an office tower, and retail office mid-rise building, a church, a shopping galleria, an arcade, a concourse subway connection, and a plaza designed to provide interest and invigorating surroundings.' (Redstone, L. G., 1976, p. 109).
20. One of the latest books which provides a lot of examples of the mega-structural approach is "Mixed Land Use--from Revival to Restoration," by Dimitri Procos, 1976.
21. To this pattern we may also classify among others The Golden Triangle, Pittsburgh, New Haven's downtown, Mile High Center, Denver, Governmental Square, Boston, Atlantic Richfield Plaza, Los Angeles.
22. The Embarcadero Center, San Francisco (master plan by John Portman & Associates) "...is part of the Golden Gateway redevelopment project. It occupies 8.5 acres of a 51 acre site on land which was formerly a

wholesale produce market place. It is one of eight redevelopment projects in the city of San Francisco..." (Redstone, L. G., 1976, p. 152). The functional and spatial elements of the Center are: two strip-like complexes, that is, high-rise office building complex (e.g., Security Pacific Bank completed in 1971, Levi Strauss Building, completed in 1974) and parallel, retail commercial facilities, The Shopping Gallery, located on three levels; Hyatt Regency Hotel, completed in 1973 and theatres; three plazas: Maritime Plaza, Justin Herman Plaza and Embarcadero Plaza, all of them somewhat peripheral to the main cluster and adjacent to freeways.

As L. G. Redstone writes: "An important feature of the entire complex is the separation from the vehicular traffic by means of elevated bridgeways and walkways. It is anticipated that pedestrians will be able to walk through nearly 58 acres of downtown San Francisco without interference of auto traffic. Another design feature of the entire complex is the generous allowance for open space over the podium levels for use as parkways, view corridors, and garden areas, planned to include artwork and fountains. Of significance to the enhancement of this urban setting is the commitment of the center's developers to allow 1% of the budget for art. The Justin Herman Plaza and Fountain, a 5 acre park at the foot of Market Street along the Embarcadero from the Mini Turnaround to Washington Street, highlights the magnetism of a spirited environment to which people respond." (Redstone, 1976, pp. 153-4).

24. It is interesting, however, that many of the megastructures were built during the recession (Rockefeller Center, 1931, Renaissance Center, 1972-77). I wonder if it could be explained in rational, economic categories or is it a coincidence or a kind of a symbolic manifestation of economic robustness in order to counterbalance the symptoms of the illness.
25. Of course, that is not the only reason that most of the new city centers have been called "island." They can also be compared to "islands" when we look at them from the perspective of the cityscape or the social

stratification of the city. See also: III.4, Criticism of Downtown Renewal--Functional aspects.

26. It is the only exception when I split urban function and form. I have done it in order to emphasize the question of new functions and a problem of accessibility. In this paper, when I write about "urban form," it usually implies form within a certain functional context; that is to say, in case of urban form, function is always considered as its immanent attribute!
27. Compare with footnote #29.
28. First of all it applies to big cities which usually have a polynuclear pattern. Compare with footnote #17.
29. These new functions, or rather functions for changed conditions are, according to E. Erber:
 - a) those which demand centrality (central banks, information media, communications, government administrations, highly specialized services, top quality arts).
 - b) labor intensive, low-earning manufacturing industries (these establishments, since they are likely to be duplicated in the outer city, should develop their own specific character in order to avoid competition).
 - c) urban reservation for the poor, minorities, ethnics, social problem families and individuals.
30. See the first question in the discussion of Charles Center, Baltimore.
31. "Architects have offered 'plazas' as a substitute for any real thinking about buildings and open space and, by extension, cities themselves. In focusing their urbanistic concerns on plazas as the principal ornament of the city design, they have abrogated to the highway engineers

the right to design a good deal of America's open space." (Stern, 1966, p. 93). This quotation needs a comment. Although I can agree with the last part of the conclusion, I would protest against the whole argument, especially the beginning, which is more than too strong--it is unjust!

32. See also, Lawrence Halprin's analysis of the open space implications of the 1961 zoning ordinance in his "New York, New York," 1968, pp. 90-5.

Notes to Conclusions and Appendix

1. This feedback may imply at least three possible statements which happened to be used as the basic assumptions in various descriptions. And so, for example: (a) urban geography assumes that the spatial patterns of human settlements reflect behavioral patterns; (b) urban design that feedback in two different ways: normative (prescriptive), i.e., a spatial pattern should conform to a behavioral pattern; and, deterministic, i.e., a spatial pattern affects a behavioral system. For some time, the latter belief was also expressed by environmental psychology. Recently, however, in environmental psychology and urban geography we can observe an interesting shift from environmental determinism to environmental probabilism (e.g., Prince, 1971). See: H. M. Proshansky, 1974, p. 78; J. D. Porteous, 1977, pp. 135-8; and A. Lipman, 1974, p. 23). Lipman makes two interesting points about architectural determinism. He sees it as a particular aspect of architectural functionalism and also as the consequence of the transformations which an architectural profession has undergone recently--namely, a social distance between an architect and a client. In this context, it is more likely that architectural determinism reflects professional self-image rather than actual potentialities of architecture.
2. According to H. Proshansky (1974), "...broad, general, crucial function of environmental psychology is to make a designer aware of implicit assumptions he makes about human behavior and experience when he does in fact create a physical setting for a particular purpose. If they remain implicit, they remain untested, unquestioned..." (Proshansky, 1974, p. 79).

3. The term used here by C. Alexander does not seem to be quite an appropriate one, particularly from a structuralist perspective (e.g., Levi-Strauss, 1962).
4. "Designing is usually unselfconscious in societies where there is a narrow range of environmental problems to consider and a low division of labor. The unselfconscious process is largely mimetic in that typical designs evolve by trial and error over an extended period of time (C. Alexander, 1967, quoted by J. Lang et al., 1974, p. 9).
5. The concept of "the behavioral environment" as part of the "personal environment" was introduced by Gestalt psychologist Koffka (1935) and Lewin (1936) and received attention from geographers and human ecologists (K. Craik, 1970) and also planners. Sonnenfeld (1972) has developed this concept into the system of a nested hierarchy of environments of which the behavioral environment is a part. Such a system includes:
 - geographical environment (external to individual, "objective")
 - operational environment (consists of those elements which impinge on man)
 - perceptual environment (that portion which man is aware of)
 - behavioral environment (part of the perceptual environment which also elicits a behavioral response toward it)(quoted from J. D. Porteous, 1977, pp. 138-40, and 142).
6. Tuan's definition is quoted from J. D. Porteous, 1977, p. 216.
7. The concept of "townscape" as the art of giving visual coherence and organization to the jumble of buildings, streets and spaces that make up the urban environment" was developed by G. Cullen in Townscape (1961).

8. Apparently, Lynch's theory has strongly influenced the recent ideology of urban design, and his terminology has been almost commonly accepted into the professional vocabulary of both literature and practice. For example, the recent "bible" of urban design--Pattern Language (C. Alexander et al., 1977)--develops, in many chapters, Lynch's concepts like the identity of place, modes, edges (or rather boundaries), paths, etc. In his subsequent books Lynch extends the concept of the image of place into a new dimension, that is time (What Time is this Place (1972)) and scale-entering the regional scale (Managing the Sense of Region (1976)).
9. Here is a sample of the dictionary which explains some key words Clay uses to extract the essence of American cityscape.

Epitome Districts--special places in cities carrying "huge layers of symbols that have the capacity to pack up emotions, energy, or history into a small space...here one can say, If you've seen one, you've seen them all..." "A city's epitome districts are crammed with clues that trigger our awareness to the larger scene--things around the corner, processes out of sight, history all but covered up. They stand for other things, they generate metaphors; they are the sort of places that ideally help us get it all together." (Clay, 1973, pp. 38-9).

Strips--"urban/suburban scapegoat" (ibid., p. 85).

Beats--the links which transform environment into "behavioral settings for regular periodic recurring movements" (daily movements, runs, trips, swings, commutes).

Fronts--regions which epitomize "dynamic unrest" more or less urbanized region.

Stacks--"high density mass of materials, minerals, objects, liquids, or energy concentrated by man's efforts, which exerts significant impact upon its environment as it shifts to a horizontal distribution pattern" (local heaps, piles, tanks) (ibid., pp. 127-8).

Sinks--"places of last resort into which powerful groups in society shunt, shove, clump, dump, and pour whatever or whomever they do not like or cannot use: auto carcasses, garbage, trash and minority groups (ibid., p. 143).

Turfs--"term used to indicate territorial space that is used or occupied, either principally or exclusively by one identity group and thus made inaccessible to others."

Turf is landscape spelled out; it says who goes where, who belongs, and who does not; it is admonitory and administered. Turfing messages are writ large across cities in new property lines and identified boundaries; on maps and in documents; with hedges, fences, walls, curbs; by means of signs, symbols, markers, locks, directions, and warnings; and beyond all this in human images and attitudes. The entire American landscape is being partitioned--faster and greater detail than ever before--into turf. (ibid., pp. 155-6).

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